

## **Geology 104, Historical Geology Laboratory, Section 01**

### **I. Contact Information**

Instructor: Dr. Gary L. Stringer, Professor of Geology, The University of Louisiana at Monroe.  
Office: Hanna Hall 321; phone: 342-1898; fax: 342-1879; e-mail: [stringer@ulm.edu](mailto:stringer@ulm.edu). Office hours: 8:45-12:00 (M); 8:45-10:15 (Tu); 8:45-10:45 and 12:00-1:00 (W); 8:45-11:00 (Th); call or e-mail for availability at other times and for appointments. Physical Geology Lecture classes held in **Hanna Hall 326 on Wednesday from 3:00 to 4:50 PM.**

### **II. Course Prerequisites/Corequisites**

There are no prerequisites for this course since it is a 100-level course. This course supplements and extends the curriculum presented in Historical Geology lecture class (GEOL 102).

### **III. Course Description**

Two hours laboratory to accompany 102. This course is intended to develop basic knowledge and practical skills needed by amateur geologist and aspiring professionals and to supplement and extend the curriculum covered in Historical Geology 102. Particular emphasis will be placed on physical stratigraphy, identification of major fossil groups, ancient environments, tectonic settings, geologic maps, and structures.

### **IV. Course Objectives and Outcomes**

- A. The student will explain major concepts in historical geology (as presented in the course topics) as evidenced by their scores on the major examinations and activities as well as class participation and discussion.
- B. The student will utilize the process skills and problem-solving skills to solve applications in historical geology-related topics as evidenced by their scores on examinations and activities.

### **V. Course Topics**

Major course topics for Historical Geology 104 include the following:

- A. Review of rock cycle, three major rock types, and fundamental concepts
- B. Physical stratigraphy and correlation
- C. Geologic time and ordering of geologic events
- D. Interpreting geologic history
- E. Radiometric dating
- F. Paleontology, fossils, and evolution
- G. Geologic structures and map symbols
- H. Geologic maps and cross sections
- I. Geologic map interpretation
- J. Plate tectonics

### **VI. Instructional Methods and Activities**

- A. Traditional experiences include advance organizers, lecture/group discussion, and demonstrations presented through PowerPoint (text, 35 mm slides, line drawings, and figures) as well as through models and realia.
- B. Clinical experiences may include small group activities, cooperative learning, hands-on/minds-on activities, discovery and inquiry learning, concept mapping, and web-based inquiry.
- C. Field-based experiences may include on- and off-campus trips.

### **VII. Evaluation and Grade Assignment**

#### **A. Methods**

- 1. knowledge written examinations (three at 25% each).

2. problem-solving investigations and activities,
3. on-line activities (computer labs across campus may be utilized),
4. collaborative and group projects, and class participation (#2-4 = 25% of grade)

#### **B. Grading Scale**

90-100 = A; 80-89 = B; 70-79 = C; 60-69 = D; Below 60 = F

Mid-term grades will be posted on Arrow on the date indicated on the course schedule. Please note that mid-term grades indicate a student's status at that time only and may or may not indicate the final performance outcome.

### **VIII. Class Policies and Procedures**

Students are expected to follow all policies stated in the current ULM Student Policy Manual & Organizational Handbook (see <http://www.ulm.edu/studentpolicy/>). It is your responsibility to know these policies. Additional class policies include:

**A. Textbook(s) and Materials:** No text is required but a current historical geology textbook can be very useful and is suggested.

**B. Attendance Policy:** Attendance policies correspond to those of the university. It should be noted that class attendance is very important in order to facilitate learning. Many of the activities cannot be completed as effectively on an individual basis and are done in groups in a lab setting.

**C. Make-up Policy:** Assignments are due on or before the indicated date (5% penalty will be assessed for late assignments). Examinations are to be taken on the dates indicated on the schedule. Only excused absences will be accepted for missed examinations. Students may take a written or oral make-up examination at the instructor's discretion and earliest convenience, or the next examination may be counted as two grades.

**D. Academic Integrity:** All students are expected to follow the ULM published policy on Academic Dishonesty (see Page 4 in ULM *Student Policy Manual* -- <http://www.ulm.edu/studentpolicy/>).

**E. Course Evaluation Policy:** All students are expected to complete the ULM on-line course evaluation at the end of the semester.

**F. Student Services:** Information about ULM student services, such as Student Success Center (<http://www.ulm.edu/cass/>), Counseling Center (<http://www.ulm.edu/counselingcenter/>), Special Needs (<http://www.ulm.edu/counselingcenter/special.htm>), and Student Health Services, is available at the following Student Services web site <http://www.ulm.edu/studentaffairs/>.

**G. Emergency Procedures:** Discussion of safety issues, fire alarm, and evacuation procedures for ULM. In the event of fire or evacuation for other purposes, do not utilize the elevators but use the stairs located at the west and east ends of the building. In the event that it becomes necessary to evacuate Hanna Hall, please use the nearest exit and assemble in the parking area in front of the building. Please do not re-enter the building until safety officials announce that it is safe.

**H. Discipline/Course Specific Policies:** Discussion of appropriate computer usage in the computer lab in Hanna Hall and at ULM. Student rights concerning access to educational records are detailed in Federal Public Law 98-380 as amended by Public Law 93-568 and in regulations published by the Department of Education. Student records and class schedules will be released only to students showing proper identification.

## **IX. Course Schedule**

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### **B. Schedule of classes:**

**Week 1 January 16** Rock cycle and fundamental concepts

**Week 2 January 23** Physical stratigraphy and correlation

**Week 3 January 30** Geologic time and ordering geologic events

**Week 4 February 6**

**No class because of University's Mardi Gras Holiday**

**Week 5 February 13** Interpreting geologic history; Radiometric dating

**Week 6 February 20** Laboratory examination #1

**Week 7 February 27** Introduction to paleontology; Kingdom Monera and Protista

**Week 8 March 5** Phyla: Porifera, Cnidaria, and Bryozoa; Phyla: Brachiopoda and Mollusca

**Week 9 March 12** Phyla: Arthropoda, Echinodermata, and Hemichordata;

**Week 10 March 19** Concept of evolution and natural selection

**Week 11 March 26**

**No class for Easter and Spring Holidays**

**Week 12 April 2** Examination of fossils and review

**Week 13 April 9** Laboratory examination #2

**Week 14 April 16** Geologic maps and cross sections

**Week 15 April 23** Plate tectonics

**Week 16 April 30**

**FINAL EXAMINATION (normal class time)**